

Title (en)
Battery charging regulator.

Title (de)
Batterieladeregler.

Title (fr)
Régulateur de charge d'une batterie.

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Application
EP 83101000 A 19830203

Priority
FR 8202065 A 19820209

Abstract (en)

1. A regulator for a battery (1) charging device, in which the battery is charged by identical sources (S1 to Sn) with a variable force, comprising a direct-direct converter (2) fed by the battery (1), a comparator module (4) which compares a fraction of the battery (1) voltage to a reference voltage derived from the direct voltage delivered by the converter (2), characterized in that it comprises - a clock (3) fed by the converter (2) and closing periodically a clock contact (h) during a short time, - a control module (5) connected to the converter and comprising a first control device (17) connected to the comparator module (4) and controlling a first (17a) and a second (17b) interruption means, a second (18) and a third (19) control device controlled by the first (17a) and the second (17b) interruption means respectively and by the clock contact (h), first cut means (18a, 19a) of the second and of the third control devices (18, 19) being in series and connecting a polarity of the converter (2) to a supply wire (8) coming from the control module, a second cut means (18b) of the second control device (18) connecting said polarity of the converter (2) to a first control wire (6) coming from the control module (5), and a second cut means (19b) of the third control device (19) connecting said polarity of the converter (2) to a second control wire (7) coming from the control module (5), the comparator module (4) delivering a signal ensuring, according to its direction and via the first control device (17), the control of the second (18) or the third (19) control device, - connection modules (M1 to Mn), one for each source (S1 to Sn), connected to the supply wire (8), to the first (6) and to the second (7) control wire, and directly connected to the other polarity of the converter (2), each control wire (6, 7) connecting the connection modules in series and in the opposite direction, each connection module (M1 to Mn) comprising a control device (B, R) controlling on the one hand a cut means (b31) connecting one of the sources (S1 to Sn) to the battery (1), a connection module being active when this cut means (b31) is closed, and on the other hand a cut means (r3, r4) in series with each control wire (6, 7), the control device (B, R) of each connection module being directly connected to the supply wire (8), the polarity of the converter (2) to which the control wires (6, 7) are connected via the control module (5) being transmitted by the second control wire (7) to the control device (B, R) of the inactive first connection module through all the active connection modules of lower rank when the comparator module (4) detects a voltage of the battery (1) which is lower than the reference voltage, and by the first control wire (6) to the control device (B, R) of the last active connection module through all the inactive connection modules of higher rank when the comparator module (4) detects a voltage of the battery (1) which is higher than the reference voltage.

Abstract (fr)

Régulateur de charge d'une batterie chargée par des sources (S1 à Sn) de puissance variable, comportant un convertisseur continu/continu (2), un module comparateur (4), une horloge (3), un module de commande (5), et des modules de connexion (M1 à Mn), un par source. Deux fils de commande (6, 7) relient le module de commande aux modules de connexion, en série et en sens inverse. Un contact (h) de l'horloge autorise un fonctionnement périodique du module de commande. Chaque module de connexion comporte un contact (b3) reliant chaque source à la batterie. Lorsque la tension batterie est supérieure à une tension de référence, le premier fil de commande (6) reçoit un signal et le dernier module de connexion en service est mis hors service; lorsque la tension batterie est inférieure à la tension de référence, le deuxième fil de commande (7) reçoit un signal et le premier module de connexion hors service est mis en service.

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Citation (search report)

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